

SPECIFICATION

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WEB BASED METHODS AND SYSTEMS FOR MANAGING COMPLIANCE ASSURANCE INFORMATION

Background of Invention

- [0001] This invention relates generally to managing compliance assurance and, more particularly, to network-based methods and systems for managing compliance assurance information.
- [0002] Compliance assurance (CA) information includes information relating to a business entity's compliance with applicable laws and regulations and/or internal business standards and policies. These laws and regulations and/or internal business standards and policies typically relate to areas such as the environment, health and safety, quality, legal, human resources, and corporate compliance. In at least some known cases, in order for a business entity to comply with applicable laws and regulations and/or internal business standards and policies, a particular facility within the business entity must perform certain CA tasks, including audits, within a specified period of time and submit a report or other documentation to an agency or a manager within the business entity. Many of these CA tasks must be performed on a routine basis at the facility.
- [0003] Likewise, other facilities within the business entity might also have to perform and report identical, similar, or different CA tasks. In addition, if a facility is found to be in non-compliance, the facility might be required to take certain action to become compliant and might have to submit documentation showing its compliance. For business entities having numerous employees located in multiple divisions worldwide,

managing CA information, which might include scheduling the CA tasks to be performed at each facility, reminding an assigned contact person at each facility of the upcoming CA tasks to be performed, confirming that the required CA tasks have been performed in a timely manner at each facility, properly documenting the CA tasks performed at each facility, and confirming that each facility within the business entity is in compliance with applicable laws and regulations and/or internal business standards and policies, is a major challenge. Failure to properly schedule, perform, and report the CA tasks, including audits, can result in delayed system operations, extended or additional maintenance, increased costs, and, in some cases, civil and/or criminal penalties.

Summary of Invention

[0004] In one aspect, a method for managing, storing, and disseminating compliance assurance (CA) information using a web-based system is provided. The system employs a server system coupled to a centralized interactive database and at least one client system. The method includes receiving CA information from a client system, storing CA information into a centralized database, cross-referencing CA information, updating the centralized database periodically to maintain CA information, providing CA information in response to an inquiry; and notifying users electronically of CA tasks and CA deadlines.

[0005] In another aspect, a method for managing, storing, and disseminating compliance assurance (CA) information using a web-based system is provided. The system employs a server system coupled to a centralized interactive database, at least one managerial user system, and at least one client system. The CA information includes at least one of site information, a CA calendar, a CA audit tracking system, a CA audit tool, and CA contacts information. The method includes the steps of receiving CA information from a client system, storing CA information into a centralized database, cross-referencing CA information, updating the centralized database periodically to maintain CA information, providing CA information in response to an inquiry, notifying users electronically of CA tasks and CA deadlines, and providing an electronic report of the CA audit tracking system and the CA calendar to the managerial user system.

[0006] In another aspect, a method for manipulating Compliance Assurance (CA) information using a web-based system is provided. The system employs a server system coupled to a centralized interactive database and at least one client system. The CA information includes at least one of business information, organizational information, site information, assigned contact person information, COE/department information, building information, CA audit tracking information, CA task information, CA calendar information, CA task reminder information, frequency of reminder information, environmental information, health and safety information, quality information, legal information, human resources information, management information, and corporate compliance information. The method includes receiving CA information, storing CA information into the centralized database, and cross-referencing CA information including creating a CA calendar based on at least one of CA tasks to be performed, a change in other previously created CA calendars, and a change in CA audit tracking information. The method further includes updating the centralized database with CA information including adding and deleting information so as to revise existing CA information including at least one of CA task information, CA calendar information, and CA audit tracking information. The method also includes providing CA information including at least one of business information, organizational information, site information, assigned contact person information, COE/department information, building information, CA audit tracking information, CA task information, CA calendar information, CA task reminder information, frequency of reminder information, environmental information, health and safety information, quality information, legal information, human resources information, management information, and corporate compliance information, in response to an inquiry, including downloading requested information from the server system and displaying requested information on the client system, the inquiry including utilizing at least one pull-down lists, check boxes, and hypertext links. Additionally, the method includes notifying users of CA tasks and CA deadlines including transmitting an electronic message to the client system from the server system notifying the user of a CA task to be performed.

[0007] In another aspect, a method for manipulating Compliance Assurance (CA) information using a web-based system is provided. The system employs a server

system coupled to a centralized interactive database, at least one managerial user system, and at least one client system. The CA information includes at least one of business information, organizational information, site information, assigned contact person information, COE/department information, building information, CA audit tracking information, CA task information, CA calendar information, CA task reminder information, frequency of reminder information, environmental information, health and safety information, quality information, legal information, human resources information, management information, and corporate compliance information. The method includes receiving CA information, storing CA information into a centralized database, cross-referencing CA information including creating a CA calendar based on at least one of CA tasks to be performed, a change in other previously created CA calendars, and a change in CA audit tracking information. The method further includes updating the centralized database with CA information including adding and deleting information so as to revise existing CA information including at least one of CA task information, CA calendar information, and CA audit tracking information. The method also includes providing CA information including at least one of business information, organizational information, site information, assigned contact person information, COE/department information, building information, CA audit tracking information, CA task information, CA calendar information, CA task reminder information, frequency of reminder information, environmental information, health and safety information, quality information, legal information, human resources information, management information, and corporate compliance information, in response to an inquiry, including downloading requested information from the server system and displaying requested information on the client system, the inquiry including utilizing at least one pull-down lists, check boxes, and hypertext links. Additionally, the method includes notifying users of CA tasks and CA deadlines including transmitting an electronic message to the client system from the server system notifying the user of a CA task to be performed, and providing an electronic report to the managerial user system including transmitting an electronic report to the managerial user system from the server system including a summary of the CA tasks performed at a site location for a time period shown on the CA calendar such that managerial oversight of the CA information is facilitated and compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at

least one of environment, health and safety, quality, legal, and corporate compliance is assured.

[0008] In another aspect, a network based system for managing, storing, and disseminating Compliance Assurance (CA) information is provided. The system includes a client system with a browser, a centralized database for storing information, and a server system configured to be coupled to said client system and said database. The server system is further configured to receive CA information from the client system, store CA information into the centralized database, cross-reference CA information, update the centralized database periodically to maintain CA information, provide CA information in response to an inquiry, and notify users electronically of CA tasks and CA deadlines.

[0009] In another aspect, a network based system for managing, storing, and disseminating Compliance Assurance (CA) information is provided. The CA information includes at least one of site information, a CA audit tracking system, a CA calendar, a CA audit tool, and contact information. The system includes a client system with a browser, a managerial user system with a browser, a centralized database for storing information, and a server system configured to be coupled to the client system, the managerial user system, and the database. The server system is further configured to receive CA information from the client system, store CA information into the centralized database, cross-reference CA information, update the centralized database periodically to maintain CA information, provide CA information in response to an inquiry, notify users electronically of CA tasks and CA deadlines, and provide an electronic report of the CA audit tracking system and the CA calendar to the managerial user system.

[0010] In another aspect, a computer program embodied on a computer readable medium for managing, storing, and disseminating Compliance Assurance (CA) information is provided. The program includes a code segment that receives CA information and then maintains a database by adding, deleting and updating CA information. The program also generates at least one CA calendar based on the received CA information, manages at least one CA audit tracking system based on the received CA information, and provides the CA calendar, the CA audit tracking system,

a CA audit tool system, and contact information to users. The program also notifies users of CA tasks and CA deadlines, and provides a report of the CA audit tracking system and the CA calendar.

Brief Description of Drawings

- [0011] Figure 1 is a simplified block diagram of a Compliance Assurance Coordination System (CACS) in accordance with one embodiment of the present invention.
- [0012] Figure 2 is an expanded version block diagram of an exemplary embodiment of a server architecture of the CACS.
- [0013] Figure 3 shows a configuration of a database within the database server of the server system including other related server components.
- [0014] Figure 4 is a flowchart of the processes employed by CACS to facilitate use.
- [0015] Figure 5 is an exemplary embodiment of a user interface displaying a home page of CACS.
- [0016] Figure 6 is an exemplary embodiment of a user interface of CACS displaying a Compliance Calendar.
- [0017] Figure 7 is an exemplary embodiment of a user interface of CACS displaying an Add/Edit Task page for the Compliance Calendar.
- [0018] Figure 8 is an exemplary embodiment of a user interface of CACS displaying a Charts page for the Compliance Calendar.
- [0019] Figure 9 is an exemplary embodiment of a user interface of CACS displaying a monthly task compliance summary report.
- [0020] Figure 10 is an exemplary embodiment of a user interface of CACS displaying a monthly task compliance status report.
- [0021] Figure 11 is an exemplary embodiment of a user interface of CACS displaying an Audit Tracking System.
- [0022] Figure 12 is an exemplary embodiment of a user interface of CACS displaying an

Add/Edit Task page for the Audit Tracking System.

[0023] Figure 13 is an exemplary embodiment of a user interface of CACS displaying a Charts page for the Audit Tracking System.

[0024] Figure 14 is an exemplary embodiment of a user interface of CACS displaying a bi-weekly audit findings status report.

[0025] Figure 15 is an exemplary embodiment of a user interface of CACS displaying a bi-weekly audit findings summary report.

[0026] Figure 16 is an exemplary embodiment of a user interface of CACS displaying an Audit Tool.

[0027] Figure 17 is an exemplary embodiment of a user interface of CACS displaying a selected audit tool checklist.

[0028] Figure 18 is an exemplary embodiment of a user interface of CACS displaying an audit checklist summary.

[0029] Figure 19 is an exemplary embodiment of a user interface of CACS displaying an audit findings report.

[0030] Figure 20 is an exemplary embodiment of a user interface of CACS displaying a Contacts Homepage.

[0031] Figure 21 is an exemplary embodiment of a user interface of CACS displaying a page for inputting a contact person's contact information.

[0032] Figure 22 is a list of at least some of the data tables and key fields used by CACS.

[0033] Figure 23 is another list of at least some of the data tables and key fields used by CACS.

[0034] Figure 24 is another list of at least some of the data tables and key fields used by CACS.

Detailed Description

[0035] Exemplary embodiments of systems and processes that facilitate integrated

network-based electronic reporting and workflow process management related to a Compliance Assurance Coordination System (CACS) are described below in detail. The systems and processes facilitate, for example, electronic submission of information using a client system, automated extraction of information, and web-based reporting for internal and external system users. The CACS allows a business entity to conduct and manage its own internal assessments and audit tracking to assure its compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at least one of the environment, health and safety, quality, legal, and corporate compliance.

[0036] In the exemplary embodiment, the CACS collects, tracks, displays, schedules, and disseminates real time information regarding Compliance Assurance (CA) information for a site location within a business entity. CA information includes at least one of business information, organizational information, site information, assigned contact person information, COE/department information building information, CA audit tracking information, CA task information, CA calendar information, CA task reminder information, frequency of reminder information, CA contacts information, environmental information, health and safety information, quality information, legal information, human resources information, management information, and corporate compliance information. In addition, the CACS electronically notifies the users of upcoming CA tasks and CA deadlines, and provides a summary report to a managerial user, which describes at least the CA tasks performed at a site location during a specific period of time.

[0037] In addition, a network-based CACS collects, tracks, displays, schedules, and disseminates real time information regarding a CA calendar. The CA calendar shows the CA tasks to be performed at a selected site location within a business entity during a specified period of time. In another embodiment, the CACS collects, tracks, displays, schedules and disseminates information regarding a CA audit tracking system. The CA audit tracking system tracks the CA tasks performed at each site location, records the findings from the CA tasks, documents the findings for purposes of reporting to an agency or the business entity's management, assures compliance with the certain laws, rules, regulations, standards, and policies, and, if non-compliance is found, tracks the corrective actions taken at the site location. In another

embodiment, the CACS includes both the CA calendar and the CA audit tracking system and further includes a CA audit tool system and CA contacts information. The CA audit tool system provides a plurality of audit checklists to help a user in conducting various audits at the site location. The CA contacts information provides information relating to persons associated with certain CA tasks and CA audits. The CA calendar, the CA audit tracking system, the CA audit tool system, and the CA contacts information in the CACS are used by multiple site locations within a business entity, namely each site location or facility subject to compliance with laws, rules, regulations, standards, and policies relating to at least one of environment, health and safety, quality, legal, and corporate compliance.

[0038] CA information relating to each site location within a business entity is received by the CACS which stores the CA information in a database, updates the database with CA information received, cross-references the CA information received, provides CA information in response to an inquiry, notifies a user electronically of CA tasks and CA deadlines, and provides a report to at least one managerial user of the CA tasks performed at specific site locations for a specified period of time.

[0039] In the CACS, CA information is stored in the database. The network based CACS provides convenient access to CA information, including original schedules, preliminary schedules and confirmed schedules. Once into the CACS home page, the user has an option to access the CA calendar, the CA audit tracking system, the CA audit tool, or the CA contacts homepage and access CA information for a specific site location. In an exemplary embodiment, for each site location, an authorized user can access the CA information.

[0040] In one embodiment, the system is a computer program embodied on a computer readable medium implemented utilizing a Structured Query Language (SQL) with a client user interface front-end for administration and a web interface for standard user input and reports. In an exemplary embodiment, the system is web enabled and is run on a business-entity's intranet. In yet another embodiment, the system is fully accessed by individuals having an authorized access outside the firewall of the business-entity through the Internet. In a further exemplary embodiment, the system is being run in a Windows NT environment. The application is flexible and designed to

run in various different environments without compromising any major functionality.

[0041] The systems and processes are not limited to the specific embodiments described herein. In addition, components of each system and each process can be practiced independent and separate from other components and processes described herein. Each component and process also can be used in combination with other assembly packages and processes.

[0042] Figure 1 is a simplified block diagram of a Compliance Assurance Coordination System (CACS) 10 including a server system 12, and a plurality of client sub-systems, also referred to as client systems 14, connected to server system 12. In one embodiment, client systems 14 are computers including a web browser, such that server system 12 is accessible to client systems 14 via the Internet. Client systems 14 are interconnected to the Internet through many interfaces including a network, such as a local area network (LAN) or a wide area network (WAN), dial-in-connections, cable modems and special high-speed ISDN lines. Client systems 14 could be any device capable of interconnecting to the Internet including a web-based phone, personal digital assistant (PDA), or other web-based connectable equipment. A database server 16 is connected to a database 20 containing information on a variety of matters, as described below in greater detail. In one embodiment, centralized database 20 is stored on server system 12 and can be accessed by potential users at one of client systems 14 by logging onto server system 12 through one of client systems 14. In an alternative embodiment database 20 is stored remotely from server system 12 and may be non-centralized.

[0043] Figure 2 is an expanded version block diagram of an exemplary embodiment of a server architecture of a CACS 22. Components in system 22, identical to components of system 10 (shown in Figure 1), are identified in Figure 2 using the same reference numerals as used in Figure 1. System 22 includes server system 12 and client systems 14. Server system 12 further includes database server 16, an application server 24, a web server 26, a fax server 28, a directory server 30, and a mail server 32. A disk storage unit 34 is coupled to database server 16 and directory server 30. Servers 16, 24, 26, 28, 30, and 32 are coupled in a local area network (LAN) 36. In addition, a system administrator's workstation 38, a user workstation 40, and a supervisor's

workstation 42 are coupled to LAN 36. Alternatively, workstations 38, 40, and 42 are coupled to LAN 36 via an Internet link or are connected through an Intranet.

[0044] Each workstation, 38, 40, and 42 is a personal computer having a web browser. Although the functions performed at the workstations typically are illustrated as being performed at respective workstations 38, 40, and 42, such functions can be performed at one of many personal computers coupled to LAN 36. Work stations 38, 40, and 42 are illustrated as being associated with separate functions only to facilitate an understanding of the different types of functions that can be performed by individuals having access to LAN 36.

[0045] Server system 12 is configured to be communicatively coupled to various individuals, including employees 44 and to third parties, e.g., internal or outside consultants, 46 via an ISP Internet connection 48. The communication in the exemplary embodiment is illustrated as being performed via the Internet, however, any other wide area network (WAN) type communication can be utilized in other embodiments, i.e., the systems and processes are not limited to being practiced via the Internet. In addition, and rather than WAN 50, local area network 36 could be used in place of WAN 50.

[0046] In the exemplary embodiment, any authorized individual having a workstation 54 can access CACS 22. At least one of the client systems includes a manager workstation 56 located at a remote location. Work stations 54 and 56 are personal computers having a web browser. Also, work stations 54 and 56 are configured to communicate with server system 12. Furthermore, fax server 28 communicates with remotely located client systems, including a client system 56 via a telephone link. Fax server 28 is configured to communicate with other client systems 38, 40, and 42 as well.

[0047] Figure 3 shows a configuration of database 20 within database server 16 of server system 12 shown in Figure 1. Database 20 is coupled to several separate computer software components within server system 12, which perform specific tasks. Server system 12 includes a collection component 64 for collecting data from users in database 20, a tracking component 66 for tracking data, and a displaying component 68 to display information. Tracking component 66 tracks and cross-references data,

including modifying existing data. Server system 12 also includes a receiving component 70 to receive a specific query from client system 14, and an accessing component 72 to access database 20 within data storage device 34. Receiving component 70 is programmed for receiving a query from one of a plurality of users. Server system 12 further includes a processing component 76 for searching and processing received queries against database 20 containing a variety of information collected by collection component 64. An information fulfillment component 78, located in server system 12, downloads the requested information to the plurality of users in response to the requests received by receiving component 70. Information fulfillment component 78 downloads the information after the information is retrieved from database 20 by a retrieving component 80. Retrieving component 80 retrieves, downloads and sends information to client system 14 based on a query received from client system 14.

[0048] Retrieving component 80 further includes a display component 84 configured to download information to be displayed on a client system's graphical user interface and a printing component 86 configured to print information. Retrieving component 80 generates reports requested by the user through client system 14 in a pre-determined format. System 10 is flexible to provide other alternative types of reports and is not constrained to the options set forth above.

[0049] Server system 12 also includes a notifying component 88 and a providing component 90. Notifying component 88 electronically transmits a message to client system 14 based on information inputted into server system 12 notifying a user of CA tasks to be performed and a CA schedule for performing those tasks. Providing component 90 electronically provides a report to manager workstation 56 (shown in Fig. 2) summarizing the CA tasks performed at a specific site location and the time period in which those CA tasks were performed.

[0050] In one embodiment, collection component 64, tracking component 66, displaying component 68, receiving component 70, processing component 76, information fulfillment component 78, retrieving component 80, display component 84, printing component 86, notifying component 88, and providing component 90 are computer programs embodied on computer readable medium.

- [0051] Database 20 is divided into a Plant Information Section (PIS) 92, a CA Calendar Section (CCS) 94, a CA Audit Tracking System Section (CAATSS) 96, a CA Audit Tool Section (CAATS) 98, and a CA Contacts Section (CAS) 100. PIS 92 contains information specific to each plant within the business entity. PIS 92, CCS 94, CAATSS 96, CAATS 98, and CAS 100 facilitate database 20 storage of CA information 102.
- [0052] PIS 90 includes CA information 102 for each site location or plant including, but not limited to, organizational information 104, site information 106, assigned contact person information 108, COE/department information 110, and building information 112.
- [0053] CCS 94 contains CA information 102 relating to scheduling CA tasks. In one embodiment, CCS 94 includes at least one of CA task information 114, CA calendar information 116, CA task reminder information 118, CA task reminder archive information 120, and frequency of reminder information 122. Revisions or modifications to one stored CA calendar can effect other related CA calendars. Tracking component 66 also updates database 20 as it revises CA calendars.
- [0054] CAATSS 96 contains CA information 102 relating to CA audits. In one embodiment, CAATSS 96 includes at least one of CA audit tracking information 124, type of audit 126, categories for findings in audit 128, and closure categories in audit 130. Revisions or modifications to CA audit tracking information 124 can effect CA calendar information 116. Tracking component 66 also updates database 20 as it revises CA audit tracking information 124.
- [0055] CAATS 98 contains CA information 102 including a plurality of audit checklists 132. Audit checklists 132 might be used by a user performing a CA audit. CAS 100 contains CA information 102 including at least CA contact information. 134. CA contact information 134 includes information relating to contact persons that might provide help in performing certain CA audits and CA tasks.
- [0056] System 10 accumulates a variety of confidential data. Therefore, system 10 has different access levels to control and monitor the security of the system. Authorization for access is assigned by system administrators on a need to know basis. In one embodiment, system 10 provides access based on job functions. In yet another

embodiment, system 10 provides access based on business-entity. The administration/editing capabilities within system 10 are also restricted to ensure that only authorized individuals have access to modify or edit the data existing in the system. System 10 manages and controls access to system data and information.

[0057] The architectures of system 10 as well as various components of system 10 are exemplary only. Other architectures are possible and can be utilized in connection with practicing the processes described below.

[0058] Figure 4 is a flowchart 200 of the processes employed by system 10 to facilitate use. Initially, the user accesses 210 a user interface such as a home page 220 of the web site through client system 14 (shown in Figure 1). In one embodiment, client system 14, as well as server system 12, are protected from access by unauthorized individuals. The user logs-in 230 to system 10 using a password (not shown) or an employee payroll number for security. Client system 14 is configured to receive 232 an electronic notice of CA tasks and CA deadlines from server system 12. Client system 14 displays 240 options available to the user through links, check boxes, or pull-down lists. Once the user selects 244 an option (in one embodiment, relating to site location and CA task type) from the available links, the request is transmitted 248 to server system 12. Transmitting 248 the request is accomplished, in one embodiment, either by click of a mouse or by a voice command. Once server system 12 (shown in Figure 1) receives 252 the request, server system 12 accesses 256 database 20 (shown in Figure 1). System 10 determines 260 if additional narrowing options are available. In one embodiment, additional narrowing options include CA calendar and CA audit tracking selection pull-down lists. If additional narrowing options are available 264, system 10 displays 240 the options relating to the prior option selected by the user on client system 14. The user selects 244 the desired option and transmits the request 248. Server system 12 receives the request 252 and accesses 256 database 20. When system 10 determines that additional options 260 are not available 268, system 10 retrieves 272 requested information from database 20. The requested information is downloaded 276 and provided 280 to client system 14 from server 12. Client system 14 transmits a report 282 to manager workstation 56 (shown in Fig. 2) relating to the CA tasks performed at the specific site location for a specified period of time. The user can continue to search 284 database 20 for other

information or exit 290 from system 10.

[0059] Figure 5 is an exemplary embodiment of a user interface 300 displaying a home page of CACS 10 (shown in Fig. 1). User interface 300 requires the user to input an organization 302 and a site location 304. The exemplary embodiment shows organization field 302 and site location field 304 as pull-down lists, however, other means for inputting this information could also be used, e.g., check boxes. User interface 300 is the entry point for anyone trying to access database 20 via the web. In addition, in the exemplary embodiment, user interface, i.e., web page, 300 provides a user with selectable hyperlink options including a Compliance Calendar 306, an Audit Tracking System 308, an Audit Tool 310, a Contacts Homepage 312, and an online tutorial 314. After inputting the necessary information in organization 302 and site location 304, the user selects between hyperlink options Compliance Calendar 306, Audit Tracking System 308, Audit Tool 310, Contacts Homepage 312, and online tutorial 314. In another exemplary embodiment, user interface 300 provides the user with selectable pull-down list options, check boxes, or radio buttons.

[0060] Figure 6 is an exemplary embodiment of a user interface 350 displaying a home page of Compliance Calendar 306 (shown in Fig. 5). User interface 350 displays a CA calendar 352 for a selected site location. CA calendar 352 also shows CA tasks 354 to be performed on certain specified days at the site location and an assigned contact person 356 for those tasks. Pull-down list 358 allows the user to display CA tasks 354 based on the assigned contact person 356. In the exemplary embodiment, CA tasks 354 are hyperlinks which allow the user to select and display additional information relating to selected CA task 354. User interface 350 also provides selectable hyperlinks including at least one of an Add/Edit Tasks link 360, Charts link 362, Reports link 364, and Logoff link 366. Add/Edit Tasks link 360 allows the user to add and/or edit the CA information inputted for selected CA task 354, including the scheduling of selected CA task 354. Charts link 362 allows the user to chart the CA information by CA task 354, assigned contact person 356, and time period. Reports link 364 allows a user to electronically notify other users and designate an assigned contact person for upcoming CA tasks and CA deadlines.

[0061] Figure 7 illustrates an example user interface 400 associated with Add/Edit Tasks

link 360 (shown in Fig. 6). User interface 400, i.e., web page, shown in Figure 7 is an example only and there are a plurality of variations possible. User interface 400 displays a selected CA task 402, a task date 404, an assigned contact person 406, a task category 408, a task status 410, a task plan 412, whether the task is a regulatory obligation 414, task frequency, 416, and a number of days prior to when a notice email should be sent 418. User interface 400 also allows the user to add and/or edit CA information 420 associated with selected task 402, including the task date 404.

[0062] Figure 8 illustrates an example user interface 450 associated with Charts link 362 (shown in Fig. 6). User interface 450, i.e., web page, shown in Figure 8 is an example only and there are a plurality of variations possible. User interface 450 displays a bar graph 452 showing CA calendar tasks 454 by a responsible person 456, and further shows CA calendar tasks 454 as either Open Past Due, Closed, or Open. Web-page 450 further allows a user to chart based on calendar tasks start date 458 and end date 460.

[0063] Figure 9 illustrates an example user interface 500 displaying a monthly task compliance summary report 502 for certain selected site locations. Summary report 502 is transmitted to an assigned business manager workstation 56 (shown in Fig. 2). User interface 500, i.e., web page, shown in Figure 9 is an example only and there are a plurality of variations possible. User interface 500 displays summary report 502 for each site 504 assigned to the manager user. Summary report 502 also displays the following information for each site 504: active tasks 506, tasks completed year to date 508, total tasks year to date 510, percentage of tasks completed year to date 512, total tasks past due 514, assigned administrator 516, and assigned managers 518. Summary report 502 provides the manager user with a summary of the CA tasks performed at a selected site location for a selected period of time such that managerial oversight of the CA information is facilitated and compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at least one of environment, health and safety, quality, legal, and corporate compliance is assured.

[0064] Figure 10 illustrates an example user interface 550 displaying a monthly task compliance status report 552 for certain selected site locations. Status report 552 is

[0065] Figure 11 is an exemplary embodiment of a user interface 600 displaying a home page of Audit Tracking System 308 (shown in Fig. 5). User interface 600 displays a CA Audit Tracking System 602 for a selected site location. In the exemplary embodiment, CA Audit Tracking System 602 displays pull-lists prompting the user for the following: audit type 604, audit name 606, finding type 608, responsible person 610, category 612, repeat finding 614, center/department 616, building/area 618, workstation 620, and finding reference 622. Pull-down lists 604, 606, 608, 610, 612, 614, 616, 618, 620, and 622 allow the user to input CA audit information. CA Audit Tracking System 602 also provides a status selection 624 which allows the user to display either Open CA audits or Closed CA audits or both. User interface 600 also provides selectable hyperlinks including an Add/Edit Tasks link 626, Charts link 628, Reports link 630, and Logoff link 632. Add/Edit Tasks link 626 allows the user to add and/or edit CA audit information inputted into CA Audit Tracking System 602. Charts link 628 allows the user to chart CA audit information. Reports link 630 allows the user to electronically notify other users and designate an assigned contact person for upcoming CA audit tasks and CA audit deadlines. User interface 600 also has a Show Findings button 634 that allows the user to sort CA audit information through the use of radio buttons and display a status summary 636.

[0066] Figure 12 illustrates an example user interface 650 associated with Add/Edit Tasks link 626 (shown in Fig. 11) shown on CA Audit Tracking System user interface 600 (shown in Fig. 11). User interface 650, i.e., web page, shown in Figure 12 is an example only and there are a plurality of variations possible. In the exemplary embodiment, user interface 650 prompts the user to input CA audit information with a plurality of pull-down lists including: finding date 652, finding type 654, number of items in finding 656, repeat finding 658, responsible person 660, auditor/contact person 662, audit type 664, audit name/number 666, finding category 668, center/department 670, building 672, workstation 674, and contact phone 676. Pull-down lists 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, and 676 allow the user to add and/or edit the CA audit information.

[0067] Figure 13 illustrates an example user interface 700 associated with Charts link 628 (shown in Fig. 11) shown on CA Audit Tracking System user interface 600 (shown in Fig. 11). User interface 700, i.e., web page, shown in Figure 13 is an example only and there are a plurality of variations possible. User interface 700 allows the user to chart CA audit information based on at least the following: scope and date 702, findings as desired 704, chart by 706, and select chart stacking and show top 708. In the exemplary embodiment, user interface 700 prompts the user under topics 702, 704, 706, and 708 to input CA audit information through a plurality of pull-down lists, data fields, and radio buttons.

[0068] Figure 14 illustrates an example user interface 750 displaying a bi-weekly audit findings status report 752 for selected site locations. Status report 752 is transmitted to assigned site manager, operations manager, and responsible person at manager workstations 56 (shown in Fig. 2). User interface 750 shown in Figure 14 is an example only and there are a plurality of variations possible. User interface 750 displays summary report 752 of open audit findings 754. Open audit findings 754 is further shown on user interface 750 as open findings 756 and open past due findings 758. Summary report 752 provides the manager users with a summary of CA audit information for a selected site location for a selected period of time such that managerial oversight of the CA audit information is facilitated and compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at least one of environment, health and safety, quality, legal, and corporate

compliance is assured.

[0069] Figure 15 illustrates an example user interface 800 displaying a bi-weekly audit findings summary report 802 for selected site locations. Summary report 802 is transmitted to assigned business manager workstation 56 (shown in Fig. 2). User interface 800 shown in Figure 15 is an example only and there are a plurality of variations possible. User interface 800 displays summary report 802 for each selected site location 804 and displays an assigned administrator 806, an assigned manager 808, a last finding date 810, an audit days old section 812, and an audit closure rate section 814. Summary report 802 provides the business manager user with a summary of the CA audit information at selected site locations for a selected period of time such that managerial oversight of the CA audit information is facilitated and compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at least one of environment, health and safety, quality, legal, and corporate compliance is assured.

[0070] Figure 16 is an exemplary embodiment of a user interface 850 displaying a home page of Audit Tool 310 (shown in Fig. 5). User interface 850 shown in Figure 16 is an example only and there are a plurality of variations possible. User interface 850 allows a user to access a plurality of audit checklists 852. In the exemplary embodiment, audit checklists 852 are hyperlinks that allow the user to access and display a selected audit checklist. Audit checklists 852 are categorized by topic. User interface 850 displays at least one of the following audit checklist category topics: U.S. Environmental 854, U.S. Health & Safety 856, U.S. DOT 858, U.S. Construction Safety 860, and U.S. Health & Safety Special Industries 862. In the exemplary embodiment, the audit checklist category topics shown on user interface 850 are hyperlinks that allow the user to access and display the audit checklists associated with the selected category. In addition, user interface 850 allows the user to sort and display audit checklists 852 based on applicability. In the exemplary embodiment, an applicability sort function 864 uses radio buttons that include: Master 866, Laboratory Areas 868, Manufacturing/Shop Appl. Servicing 870, and Office 872. Although radio buttons are shown for applicability sort function 864, other such inputting means could also be employed, including pull-down lists, check boxes, or hyperlinks. User interface 850 also allows a user to save a selected audit checklist.

[0071] Figure 17 illustrates an example user interface 900 of a selected audit tool checklist 852 (shown in Fig. 16). User interface 900 shown in Figure 17 is an example only and there are a plurality of variations possible. In the exemplary embodiment, user interface 900 displays a plurality of pull-down menus and data fields that allow a user to input information relating to a selected site location and selected audit checklist 852. The pull-down menus and data fields include the following: Organization 902, Site 904, Location Detail 906, Audit dates 908, Auditors & General Comments 910. User interface 900 also provides an Update and Save button 912, a Make Report button 914, a Print Checklist button 916, and instructions 918 on responding to selected audit tool checklist 852.

[0072] Figure 18 illustrates an example user interface 950 of a saved audit checklist summary 952. Saved audit checklist summary 952 is associated with an audit checklist selected from audit checklists 852 (shown in Fig. 16). User interface 950 shown in Figure 18 is an example only and there are a plurality of variations possible. Saved audit checklist summary 952 provides the user with a summary of the CA audit information at selected site locations for a selected period of time such that oversight of the CA audit information is facilitated and compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at least one of environment, health and safety, quality, legal, and corporate compliance is assured.

[0073] Figure 19 illustrates an example user interface 1000 of an audit findings report 1002. Audit findings report 1002 is associated with an audit checklist selected from audit checklists 852 (shown in Fig. 16). User interface 1000 shown in Figure 19 is an example only and there are a plurality of variations possible. Audit findings report 1002 provides the user with a summary of the CA audit information at selected site locations for a selected period of time such that oversight of the CA audit information is facilitated and compliance with certain laws, rules, regulations, standards, and policies relating to certain topics including at least one of environment, health and safety, quality, legal, and corporate compliance is assured.

[0074] Figure 20 is an exemplary embodiment of a user interface 1050 displaying a home page of Contacts Homepage 312 (shown in Fig. 5). User interface 1050 shown in Figure 20 is an example only and there are a plurality of variations possible. User

interface 1050 allows a user to search for a contact person and access the contact person's contact information. The contact person would be involved with at least one CA audit tasks. In the exemplary embodiment, a pull-down list of contact persons 1052 is provided on user interface 1050. The user can select a contact person from pull-down list 1052. In addition, user interface 1050 provides a sorter 1054 for sorting contact persons on pull-down list 1052. In the exemplary embodiment, the sorter includes an All Contacts link 1056, a Location link 1058, and an Organization link 1060. User interface 1050 also provides a Contacts Details button 1062 which, when selected, provides the user with the selected contact person's contact information.

[0075] Figure 21 illustrates an example user interface 1100 for inputting a contact person's contact information 1102. User interface 1100 shown in Figure 21 is an example only and there are a plurality of variations possible. User interface 1100 allows a user to add or edit contact information 1102. In the exemplary embodiment, user interface 1100 displays a plurality of pull-down lists and data fields that allow a user to input contact information 1102. The pull-down lists and data fields include at least one of the following: Full Name 1104, Title 1106, First Name 1108, DialComm Phone 1110, Organization 1112, Location 1114, Building 1116, Address 1118, Last Name 1120, External Phone 1122, Fax 1124, Cell Phone/Pager 1126, Home Phone 1128, Internet Email Address 1130, and Expertise/Responsibility 1132.

[0076] Figure 22 is a list 1150 of at least some of the data tables 1152 and key fields 1154 used within Plant Information Section (PIS) 92 (shown in Fig. 3) in database 20 (shown in Fig. 3). List 1150 shown in Figure 22 is an example only and there are a plurality of variations possible. List 1150 includes the information that might be used by either Compliance Calendar 306 or Audit Tracking System 308 (both shown in Fig. 5). Data tables 1152 shown on list 1150 include: Org. 1156, Site 1158, Contact 1160, COE/department 1162, and Building 1164. The key fields 1154 shown below data table Org. 1156 include: orgname 1166, table 1168, orgpassword 1170, business 1172, administrator 1174, and suborg 1176. The key fields 1154 shown below data table Site 1158 include: location 1178, admin 1180, password 1182, suborg 1184, atsc on 1186, project 1188, and subsite 1190. The key fields 1154 shown below data table Contact 1160 include: contact name 1192, contact last name 1194, contact first

name 1196, contact phone 1198, contact title 1200, EHS dedicated 1202, contact location 1204, contact org 1206, and contact email 1208. The key fields 1154 shown below data table COE/department 1162 include: location 1210, COE/department 1212, subsite 1214, and archive 1216. The key fields 1154 shown below data table Building 1164 include: location 1218, and building 1220.

[0077] Figure 23 is a list 1300 of at least some of the data tables 1302 and key fields 1304 used within CA Audit Tracking System Section (CAATSS) 96 (shown in Fig. 3) in database 20 (shown in Fig. 3). List 1300 shown in Figure 23 is an example only and there are a plurality of variations possible. Data tables 1302 shown on list 1300 include: Audit 1306, Audit Type 1308, Category 1310, and Closure 1312. The key fields 1304 shown below data table Audit 1306 include: location 1314, ID 1316, audit name 1318, audit date 1320, audit type 1322, finding type 1324, category 1326, citation 1328, numitems 1330, repeatitem 1332, classification type 1334, COE/department 1336, bldg 1338, workstation 1340, responperson 1342, description 1344, corrective action 1346, contact person 1348, contact phone 1350, close date 1352, close comment 1354, close person 1356, status 1358, closure due date 1360, update date 1362, and update user 1364. The key fields 1304 shown below data table Audit Type 1308 include: audit name 1366, and audit group 1368. The key fields 1304 shown below data table Category 1310 include: category 1370, and super category 1372. The key fields 1304 shown below data table Closure 1312 include: closure 1374.

[0078] Figure 24 is a list 1400 of at least some of the data tables 1402 and key fields 1404 used within CA Calendar Section (CCS) 94 (shown in Fig. 3) in database 20 (shown in Fig. 3). List 1400 shown in Figure 24 is an example only and there are a plurality of variations possible. Data tables 1402 shown on list 1400 include: Task 1406, Calendar Media 1408, Task Reminder 1410, Task Reminder Archive 1412, and Frequency 1414. The key fields 1404 shown below data table Task 1406 include: location 1416, task name 1418, resp person 1420, resp cc 1422, mult cc 1424, media 1426, remind 1428, first rem date 1430, rem freq 1432, rem days prior 1434, reg comp 1436, task plan 1438, weblink 1440, comp 1442, comp date 1444, project 1446, and update date 1448. The key fields 1404 shown below data table Calendar Media 1408 include: media 1450. The key fields 1404 shown below data table Task

